

Patent Claims:

1. An objective having a plurality of lenses, mirrors and at least one beam splitter element inserted in an objective housing, characterized in that one or more surfaces (26, 27, 28), situated in the beam path, of the beam splitter element (20) are provided as correction aspherics.
2. The objective as claimed in claim 1, characterized in that the beam splitter element (20) is connected to manipulators (22) that are arranged on a manipulator carrier (23) which is permanently connected to the objective housing (1b).
3. The objective as claimed in claim 1, characterized in that provided as correction aspherics are an entry surface (26) of the beam splitter element (20), an intermediate exit surface (27), situated offset in relation thereto, and a rear exit surface (28), as seen in the beam direction, of the beam splitter element (20).
4. The objective as claimed in claim 3, characterized in that the beam splitter element (20) can be tilted about at least two axes (x, y).
5. The objective as claimed in claim 4, characterized in that the tilt axes (y, x, z) intersect at a point (30).
6. The objective as claimed in claim 5, characterized in that the point of intersection (30) is located in the beam splitter plane (29) of the beam splitter element (20) in a central region in which the middle ray of the beam path lies.
7. The objective as claimed in claim 4, characterized in that the beam splitter element can be tilted about three axes, one of the tilt axes (x) lying in the beam splitter plane (29), and the two other tilt axes (y, z) each lying, offset by 90° in relation thereto, at an angle of 45° to the beam splitter plane (29).

8. The objective as claimed in claim 2, characterized in that provided for the purpose of deformation decoupling of the beam splitter element (1c) is an intermediate support (23) on which the beam splitter element (20) is arranged and on which the manipulators (22) act.
9. The objective as claimed in one of claims 1 to 8, characterized in that it is provided as a projection objective (1) for microlithography for producing semiconductor components.